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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,390

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Gerard Elise Noel Schreurs

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EXAMINER

PENDLETON, DIONNE

ART UNIT

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2627

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,390	Applicant(s) SCHREURS ET AL.	
	Examiner DIONNE H. PENDLETON	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. **Claims 1-5 and 8-11** are rejected under 35 U.S.C. 102(e) as being anticipated by **Kai (US 2002/0186633)**.

Regarding claim 1,

Kai teaches a device for recording information in a track on a record carrier ("**6**" in **figure 1**), the device comprising:

a head ("**5**" in **figure 1**) for generating a beam of radiation for writing marks and spaces between the marks, and for generating at least one read signal in dependence on the marks and spaces, the marks and spaces each having a nominal run length of a predetermined number of bits, and the run lengths constituting a recorded pattern having a multitude of different run lengths for representing the information,

detection means ("**11**" in **figure 1**) coupled to the read signal for generating a signed deviation value signal (**see paragraphs [0125-0129]**) indicative for a position

deviation of a starting edge of a mark and/or an ending edge of a mark with respect to a nominal position of said edge (**see discussion of position deviation in paragraphs [0133] and [0134]**),

calculation means (**"12" in figure 1**) for selecting at least one predefined run length pattern and determining a correction signal based on at least one statistically calculated parameter of the signed deviation value signal for the selected run length pattern, and

radiation source control means (**"2" and "13" in figure 1**) for controlling the power of the radiation source (**"1" in figure 1**) during said writing in dependence of the correction signal.

Regarding claim 2,

Kai teaches a device as claimed in claim 1, wherein the calculation means (**"12" in figure 1**) are arranged for calculating a mean value of the run length between the starting edge and the ending edge of marks as the parameter of the signed deviation value signal (**see discussion of "47" in paragraph [0122]**).

Regarding claim 3,

Kai teaches a device as claimed in claim 1, wherein the calculation means (**"12" in figure 1**) are arranged for calculating a mean value of the position deviation of the starting edge and/or the ending edge as the parameter of the signed deviation value

signal **(see discussion of offset control loop in paragraphs [0117] and [0118], also see discussion of position deviation in paragraphs [0133] and [0134])**.

Regarding claim 4,

Kai teaches a device as claimed in claim 1, wherein the calculation means are arranged for selecting as the run length pattern marks and/or spaces nominally having a single predefined run length, or run lengths in a limited range of run lengths, or a run length sequence including at least a mark and at least one space having predefined run lengths **(see data pattern of figure 9 comprising a series of marks and spaces, also see paragraph [0122])**.

Regarding claim 5,

Kai teaches a device as claimed in claim 4, wherein the calculation means are arranged for calculating a mean value of said parameter in dependence of the size of a space preceding the starting edge or following the ending edge of the mark **(see paragraph [0099])**.

Regarding claim 8,

Kai teaches a device as claimed in claim 1, wherein the detection means **(11)** are arranged for generating the signed deviation value signal during an optimum power control mode (OPC) **(see discussion of test patterns i.e., OPC in paragraph [0102])**, in which mode test information is written and the radiation source control means are controlling the power of the radiation source during said writing at an optimum power

according to predefined settings and/or previously generated values of the correction signal **(paragraph [0213] teaches that phase error is measured from a test pattern for adjusting signal deviation).**

Regarding claim 9,

Kai teaches a device as claimed in claim 1, wherein the detection means **(11)** are arranged for generating the signed deviation value signal during said writing **(paragraph [0213] teaches that phase error is measured from a test pattern for adjusting signal deviation)**, during which writing the radiation source control means are controlling the power of the radiation source at an optimum power according to predefined settings **(paragraph [0102] teaches that test patterns are written at several kinds of emission power levels)** and/or previously generated values of the correction signal, by temporarily interrupting said writing and during said interruption reading a part of the recorded pattern for generating the read signal **([0213] teaches that phase error adjustment is carrier out for every rotation of the disc).**

Regarding claim 10,

Kai teaches a method of controlling the power of a radiation source during recording information in a track on a record carrier **(“6” in figure 1)**, the method comprising:

writing and reading **(via “5” in figure 1)** marks and spaces between the marks, the marks and spaces each having a nominal run length of a predetermined number of bits, and the run lengths constituting a recorded pattern having a multitude of different

run lengths for representing the information (**see data pattern of figure 9 comprising a series of marks and spaces, also see paragraph [0122]**),

generating a signed deviation value signal (**see paragraphs [0125-0129]**) indicative of a position deviation of a starting edge of a mark and/or an ending edge of a mark with respect to a nominal position of said edge, selecting at least one predefined run length pattern,

determining a correction signal ("**12**" in **figure 1**) based on at least one statistically calculated parameter of the signed deviation value signal for the selected run length pattern and

controlling the power of the radiation source ("**1**" in **figure 1**) during said writing in dependence of the correction signal (**see "2" and "13" in figure 1**) .

Regarding claim 11,

Kai teaches a record carrier ("**6**" in **figure 1**), of a recordable type comprising a track for recording information, the recording comprising:

writing and reading (**via "5" in figure 1**) marks and spaces between the marks, the marks and spaces each having a nominal run length of a predetermined number of bits, and the run lengths constituting a recorded pattern having a multitude of different run lengths for representing the information (**see data pattern of figure 9 comprising a series of marks and spaces, also see paragraph [0122]**), and

an optimum power control process including generating a signed deviation value signal indicative for a position deviation of a starting edge of a mark and/or an ending edge of a mark with respect to a nominal position of said edge (**see discussion of test patterns i.e., OPC in paragraph [0102]; also paragraph [0213] which teaches that phase error is measured from a test pattern for adjusting signal deviation**),

selecting at least one predefined run length pattern (**see pattern of figure 9**),

determining a correction signal based on at least one statistically calculated parameter of the signed deviation value signal for the selected run length pattern (**"12" in figure 1**) and

controlling the power of the radiation source during said writing in dependence of the correction signal, the record carrier comprising prerecorded control information for adjusting the optimum power control process (**see "2" and "13" in figure 1**) ..

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kai (US 2002/0186633)** in view of **Hurst, Jr. (US 5,561,656)**.

Regarding claims 6 and 7,

KAI does not teach calculating a pre-heat effect of a mark and controlling the power of the radiation source in dependence of the space preceding the starting edge of the mark, as claimed.

HURST teaches a method of recording information , wherein in the instance of a space region of shorter length, the preheat pulse may be omitted, and in the instance of a space region of longer length, the preheating pulse is applied (**column 2, lines 47-54**).

It would have been obvious for one of ordinary skill in the art at the time of the invention to alter the invention of KAI per the teachings of HURST, employing a preheating pulse in instances where the space region is longer than a first length, for the purpose of avoiding excessive cooling of the data layer of the optical disk, and reliably writing marks on the disk (**column 2, lines 2-6 and lines 21-25**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIONNE H. PENDLETON whose telephone number is (571)272-7497. The examiner can normally be reached on 10:30-7:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dionne H Pendleton/
Examiner, Art Unit 2627

/Wayne R. Young/
Supervisory Patent Examiner, Art Unit 2627